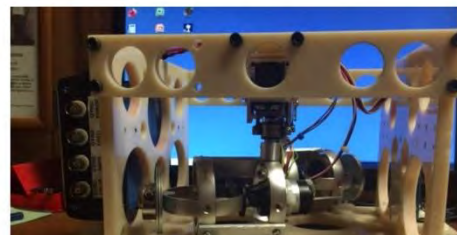
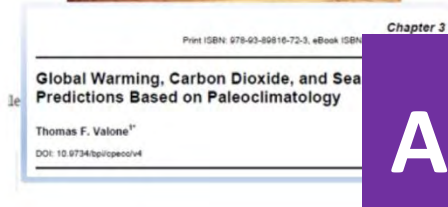
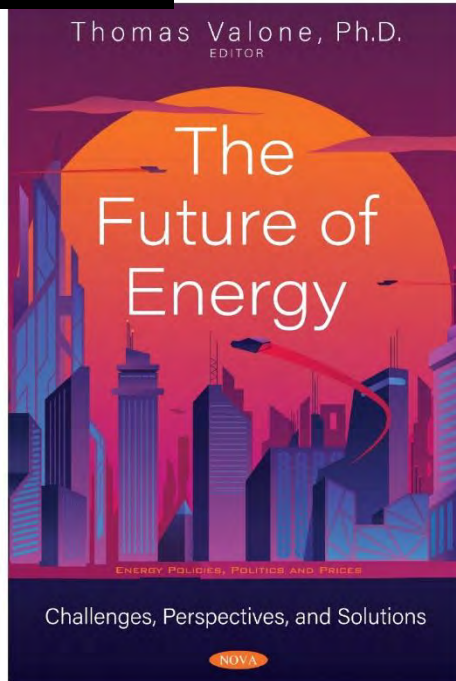




# INTEGRITY RESEARCH INSTITUTE



## ANNUAL REPORT 2020

# CREDITS

**Integrity Research Institute wishes to acknowledge the following for this  
IRI Annual Report 2020**

***Thomas F. Valone, PhD, PE***

*President and Editor*

***Jacqueline Panting ND***

*Executive Director*

***Elaine Chen***

***Dwight Beckford***

***Steve Damours***

***Mike Gamble***

***Robert DeBiase***

***Dr. Thorsten Ludwig***

**Integrity Research Institute  
5020 Sunnyside Avenue, Suite 209  
Beltsville MD 20705  
301-220-0440**

*A nonprofit 501(c)3 corporation*

**[www.IntegrityResearchInstitute.org](http://www.IntegrityResearchInstitute.org)**



## **IRI OFFICERS AND DIRECTORS - 2020**

### **Officers**



**Thomas Valone  
President**



**Elaine Chen  
Secretary**



**Jacqueline Panting  
Treasurer**

### **BOARD OF DIRECTORS**

**Thomas Valone, PhD  
Elaine Chen, RN  
Jacqueline Panting, ND**

### **ADVISORS TO THE BOARD OF DIRECTORS**

**Elliot Maynard, Ph.D**

**Thorsten Ludwig PhD**

**Jim Dunn**

**John Powers, Ph.D**

**Beverly Rubik, Ph.D**

**Jeff Norris, MBA**

**Ivan Kruglak**

**Jonathan Kolber, MBA**

**Stephen Damours**

## PRESIDENT's LETTER

IRI was fortunate to receive a willing volunteer, Graham Gunderson, in 2020 to begin building zero bias diode arrays, following my published books and journal articles on the energy harvesting opportunity they represent. By the end of 2020, Graham had set up a website at [cleanlimitlesspower.com](http://cleanlimitlesspower.com) and started specifying several types of diodes to test. I was honored to be mentioned as the inspiration for the project, due to my proposal for zero bias diode arrays.

During 2020, the **Spiral Magnetic Motor (SMM)** moved along with the testing of the long-awaited *magnetic switch* at the commutation point using piezoelectric and magnetostrictive materials (MS-PZT), thanks to the expertise of Hathaway International in Toronto, Ontario. The next phase involves testing and optimizing the performance of the switch, including matching it with the proper SMM and measuring the magnetic field pulsed output, with Galfenol and Terfenol-D magnetostrictive rods.

As you will learn in the **Highlights 2020** section, we received over one hundred orders for the new EM Pulser 78 which I had to develop in a month's time. This was because I promised to have it available that soon and gave a discount for advance orders, while on the Coast to Coast AM radio show. You can see some of his handiwork at [www.BioenergyDevice.org](http://www.BioenergyDevice.org) and at <https://tinyurl.com/IRI-YouTubeChannel>.

The IRI propulsion project with Mike Gamble, with his **Control Moment Gyro (CMG)** for electrically powered unidirectional force as Boeing has been doing for years on their satellites, has benefited from a generous benefactor who started working with IRI in 2020. This project is progressing and has contributed a demo presentation, proving inertial force motion is possible, at our COFE12 event [www.futureenergy.org](http://www.futureenergy.org).

Lastly, this **IRI Annual Report 2020** is the most valuable and practical energy innovation ideas that can be packed into one report. It is on our website, with previous IRI Annual Reports in **PDF**, in order to use any of the hot links which give you a glimpse of the source reference articles and websites that we referenced. This Report contains lots of investor-ready energy inventions. For more information, as an IRI Member, if you have not received the **COFE12 Double DVD Set**, please request your FREE copy by email or send a letter or fax.

Thomas Valone, PhD, PE  
President  
Integrity Research Institute  
5020 Sunnyside Avenue, Suite 209  
Beltsville MD 20705  
301-220-0440, 800-295-7674, FAX: 301-513-5728  
[www.Integrity-Research.org](http://www.Integrity-Research.org)

## HIGHLIGHTS 2020

We are immensely proud of IRI's accomplishments for the past year. Despite the world changing situation due to the COVID pandemic, we were able to carry out most of all our mission goals. With our new Electronic Catalog hosted by Shopify <https://integrity-research-institute.myshopify.com/> we are available worldwide. Our *Facebook page*, *Instagram* and *YouTube channel page* have had hundreds of hits. Next for the upcoming months, we will be revamping our complete website, including the homepage and program pages. We are most excited about this and expect to have it all completed by 2022.



**Conferences and Appearances.** As the whole world was coping with the COVID pandemic restrictions for large gatherings, we still were able to hold our 12<sup>th</sup> Conference on Future Energy on August 14-15, via Zoom.com which boasted an attendance as good as when presented live. We featured 14 speakers including: Dr Dean Radin from the Institute for Noetic Science speaking on his past psychic research and latest book on bioenergetic processes; Col. Eric Felt from the USAF Space Command

Program in Albuquerque NM speaking on space solar power; Mike Gamble on the Tesla motor and his Control Moment Gyro research; Paul Murad regarding Gravitation as a Rotational field; Prof. Louis Rancourt speaking on the light effects on Gravity; Ray Fleming and Bill Alek discussing Electrons, Protons and Electron Spin; Dr Thorsten Ludwig speaking on Zero Point Energy; Steve Hampton presented on the asymmetric impulse drive; and our IRI President Valone presented on the Climate need for Clean Energy, as well as the Introduction to his new book project, a Ufology textbook. Friday's COFE12 presentations can be viewed online at [https://www.youtube.com/watch?v=n1CH9\\_0FsOE](https://www.youtube.com/watch?v=n1CH9_0FsOE) or both 8-hour days by purchasing our \$25 **Double DVD COFE12 Set**, which was also sent to every IRI Member at the end of 2020. Dr Valone also presented at the UFO Mega Congress in Las Vegas NV in February 2020, which was before the pandemic hit, introducing his Ufology textbook to a receptive and enthusiastic audience. Many other engagements had to be cancelled because of the pandemic.

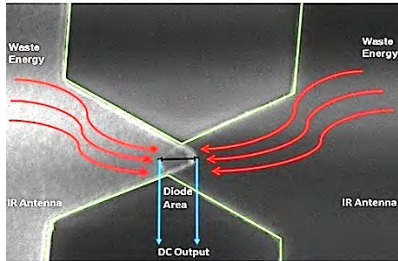
**Propulsion Program:** The CMG Project or Control Moment Gyro Project had a milestone this year, with a successful proof of principal model that moved with powered by the scissoring gyros and *demonstrated at COFE12*. As a reminder for our readers, this is a force producer with electrical input only, modeled after a confidential Boeing CMG that only recently became public knowledge (see room-size version here →). We continue with more data and measurements being done, along with an upgrade to a larger set of gyroscopes. Dr Valone is the principal director along with Mike Gamble, a retired Boeing aerospace engineer, who worked on the Boeing CMG directly. For years, Inertial Propulsion has been advocated by





IRI and now in 2020 we have seen a working demo of a table-top model prototype. The purpose of this experiment is to show that forward and backward thrust is possible by scissoring gyros. Initial funding has been provided by our Institute and now we are pleased to say that we have a Sponsor who is providing a substantial amount on financial support to continue with our research.

### Energy Program:



Regarding our Energy Program, the Zero Bias Diode project, which also is designed to convert thermal energy into electricity, received a shot in the arm with a number of supporters creating a focus group by email, giving initial credit to Valone for inspiring the investigation of these diodes and energy harvesters. Graham Gunderson is the principal investigator and is reporting on his diode array experiments, after receiving some funding from the group, including IRI.

As to our SMM project, we have had much advancement. Yes, a magnetic gradient has been implemented into a permanent magnet motoring cycle. Now we have built a proper choice of a magnetic switch as well as a steel vise assembly, after the published work of Dr. T. Ueno from the University of Tokyo. This Spiral Magnetic Motor (SMM) is designed to provide mechanical torque for a small electrical stimulus to permanent magnet power. Peer-reviewed, online <https://tinyurl.com/SMMslides> or <https://tinyurl.com/SMMpaper>



### Bioenergetics Program:



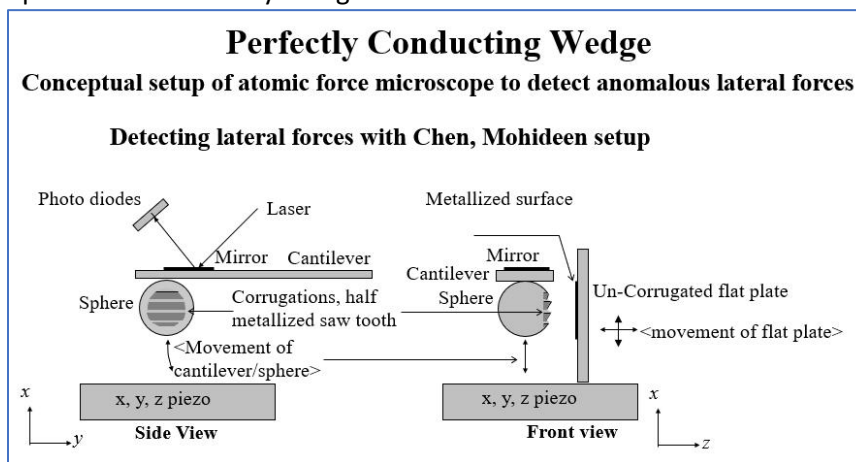
We are most proud of our newly designed Model 78 EM Pulser which now has the following attachments: PulsePad, Red LED, UV LED, and Magnetic Coil probe. The **EM Pulser Model 78**, with the Earth Schumann frequency of 7.8 Hz for cardioprotection, weighs two ounces in a 1" x 2" x 5" case with a sure grip rubber boot and belt loop for extra comfort! Its portable so you can use anywhere, powered by a rechargeable battery. At home you can plug in any socket to save battery life, without removing the battery, which is a big

improvement over the previous models. A rechargeable battery included along with a special AC Recharger we had to import from overseas. Our line of PREMIER electrotherapy devices now includes the **PREMIER 4000**, also known as **The Energy Chair** which has many therapeutic benefits and much public appeal. This 250 kV Tesla Coil model has a specially designed acrylic chair, so you can comfortably receive treatments, as well as light any fluorescent light with your hand, while seated. Also our **OsteoPad** and **MaxiMat** models continue to be very popular and effective for bone and cartilage

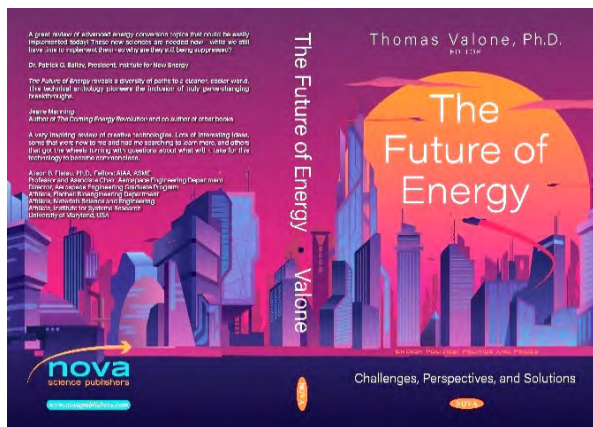


regeneration. The **Microcurrent Antioxidant Electrotherapy** clothes project, which has patent #8825174 by the US Patent and Trademark Office is moving forward with negotiations for licensing. We hope to have signed agreements by the end of 2021.

**Zero Point Energy Program.** The research continues on the possibility of tapping zero point energy through zero biased diodes, as noted above. One of our many projects is the **“Quantum Fire Project”** which with Bob DiBiase in partnership with GASE of Berlin Germany. Because the Casimir forces are ultimately the result of quantum effects, if asymmetric forces are observed, it would unleash the most disruptive technology ever seen since humans first harnessed fire. The Casimir equations are very convincing. IRI received some funding this year and preliminary data and tests with suitable polymers have been produced. In Germany, Dr Ludwig along with Bob DeBiase, continue to experiment with many designs to see which is the most effective and efficient to produce a unidirectional force from the Casimir force. Much research is still being done for this project, such as trying to apply metallic coating only on one side of a groove that is microscopic in size. Also we have some students that are researching many different possibilities with zero biased diodes to harvest ambient thermal energy and we plan to have some papers published when more data is accumulated and reviewed.



**IRI Publications and Books:** We had a record amount of publications this year, including the new book: *The Future of Energy* by Nova Science Publishers, with almost a dozen contributed chapters,



in hardbound book format. Also a record amount of journal papers, and articles were published and our **“Future Energy Annual 2019”** was mailed for free to our IRI membership. We are also very proud of Dr Valone’s multiple journal papers on climate change including: **“World Temperature Control and Carbon Capture”** published by Discovery Publishing, **“Linear Global Temperature Correlation to CO<sub>2</sub>, Sea Level”** which was published in the special Issue of the **Innovation in Engineering Sci Tech**, Sept

2020. Also a paper that supports our Electrogravitics program, **“Review of Electrogravitics and Electrokinetics Propulsion”** originally published in 2015 in the **Journal of Geosciences**, special issue on Gravity (which received 12,500 downloads to date), was now reprinted in the **Journal of New Insights into Physical Sciences**. Also **“Modern Meditation Training”** was published in the **Wiley Handbook of the Global Workspace** during 2020.



**Future Energy News Program:** Free newsletters, brochures, and reports that include the latest news on energy developments, discoveries and research given to the public. ***“Future Energy eNews”*** is sent via email, monthly, to over 5000 recipients worldwide, free of charge through Constant Contact email service. Anyone may sign up for this educational service from the IRI homepage, [www.IntegrityResearchInstitute.org](http://www.IntegrityResearchInstitute.org). This electronic newsletter showcases five best emerging eco-friendly technologies in the areas of energy, propulsion, and bioenergetics that are being developed worldwide and published in Journals, Magazines and Newspapers, such as the amazing [vertical farming breakthrough](https://aerofarms.com/technology) reported **FE eNews** in January 2020 about **AeroFarms**. See <https://aerofarms.com/technology> to see the future of warehouse, disease-free, indoor commercial farming without soil that is 100 times more efficient, including using 90% less water.

The top story from 2020 **Future Energy eNews** is Dr. Paul Thibado’s discovery of AC electricity generation from room-temperature oscillations of a thin, one-atom thick sheet of graphene. The short YouTube announcement of the discovery <https://youtu.be/KiLTEjm8zLw> was included in the **FE eNews** reprinted article: <https://phys.org/news/2020-10-physicists-circuit-limitless-power-graphene.html> which explained that the graphene sheet kept oscillating continually (right side image below). The physicists tried charging it electrically and found the AC electricity could charge a capacitor as long as two diodes are in the circuit, for current flow in both directions. The 2020 journal article: <https://journals.aps.org/pre/abstract/10.1103/PhysRevE.102.042101>.

It is worth mentioning that the original discovery was made in 2014 as shown below (left side) <https://phys.org/news/2014-04-track-ripples-freestanding-graphene.html>. It also referenced a FREE access **Nature Communications** article that is worth downloading <https://www.nature.com/articles/ncomms4720>. This shows how long it takes even experts to go from anomaly to finding free energy and could end up in a future energy textbook.

### Researchers track ripples in freestanding graphene for first time

by Chris Branam, University of Arkansas



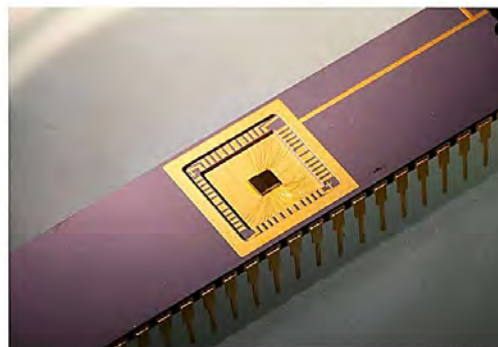
Paul Thibado, University of Arkansas professor of physics. Credit: Russell Cothren

(Phys.org) —An international team of scientists, led by physicists at the University of Arkansas, has tracked the dynamic movement of ripples in freestanding graphene at the atomic level.

OCTOBER 2, 2020

### Physicists build circuit that generates clean, limitless power from graphene

by University of Arkansas



Credit: University of Arkansas

A team of University of Arkansas physicists has successfully developed a circuit capable of capturing graphene’s thermal motion and converting it into an electrical current.

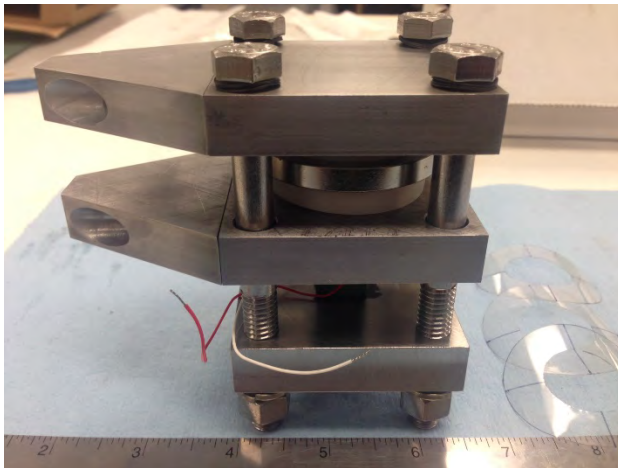


## ***Spiral Magnetic Motor*** – Progress on IRI Research

### Project Low Energy Magnet Switching

Some physicists remind us on science documentaries that electrons in the mountains have been spinning for millions of years. Yet, the key to unlocking zero-point energy and the negative energy of the quantum vacuum is the spinning electrons which create magnetic fields and also the overlooked “**Magnetic Gradient.**” Along with the help of the University of Maryland, Aerospace Department, IRI has also been collaborating with Hathaway International to make a magnetic switch for the Spiral Magnetic V-Track Motor.

While we use the voltage gradients, thermal gradients, and even gravity gradients all of the time to perform useful work, our world has not mastered the magnetic gradient (a change in magnetic field intensity over a distance of space). The Spiral Magnetic Motor (SMM) is just the kind of magnetic gradient motor which is ripe for scientific research today because the practice of energy harvesting is gaining a wide range of possible options. Capitalizing on an ambient source of energy, such as a passing magnet causing a voltage spike with Wiegand wires, will lead to a viable method of magnetic switching for the SMM rotor so that the cycle can be repeated. This is very exciting for



the serious inventor since IRI has shown that 90% of the cycle is already powered by permanent magnets in an SMM. IRI has built many SMM models and published the results in peer-reviewed journals.<sup>1</sup> The next phase of research is to test and optimize the MS-PZT switch by custom designing a piezoelectric transducer for commutation, with a magnetostrictor.

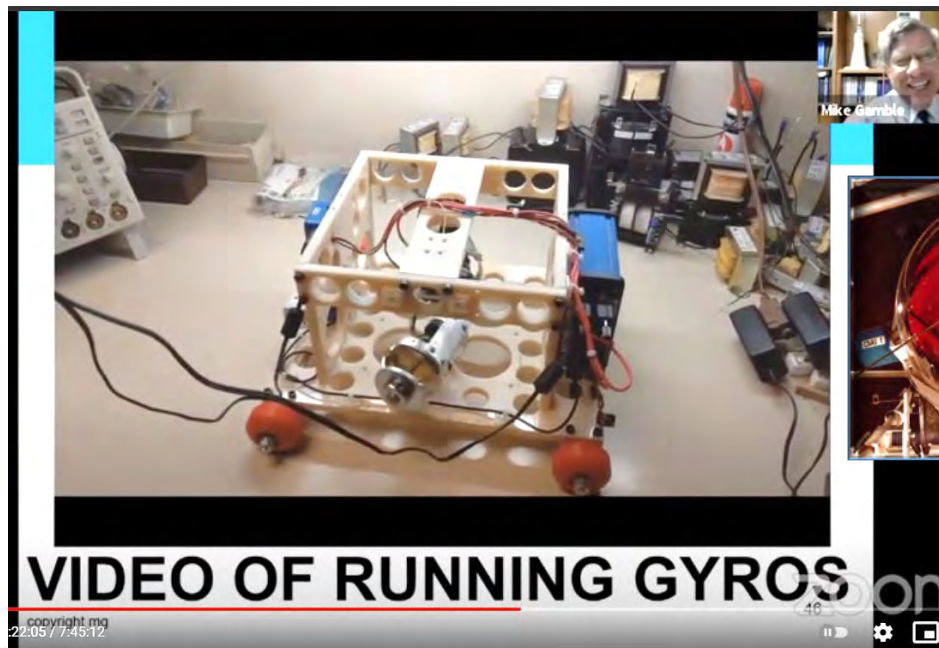
Peer-reviewed journal paper is online <https://tinyurl.com/SMMpaper>. A short video is also posted online: [www.tinyurl.com/IndiegogoSMM](http://www.tinyurl.com/IndiegogoSMM) IRI

has been funding the materials for the Spiral Magnetic Motor Research Project, up until now with the volunteer labor of engineer, Thomas Valone, whose SMM paper has already received popular achievement award notification of “5000 reads” on ResearchGate, from research done with multiple test models of the axial design. The exciting part is that we now have all of the statistics necessary to predict angular momentum, torque, power, and energy production. This helps tremendously for considering energy harvesting for any electronic motion sensor, speedometer, piezoelectric switching controls, etc. The development objectives for this spiral magnetic motor (SMM) and generator project, apply to providing a motor or generator. Both applications utilize an increasing magnetic field strength (gradient) surprisingly present in 90% of the spiral magnetic cycle. An SMM Microturbine will free all the countries of the world from dependence on coal and natural gas, while an SMM Magnetic Motor will supplant oil usage for vehicles, thus raising the standard of living for everyone with long-lasting, clean energy.

---

<sup>1</sup> E.g., “Permanent Magnet Spiral Motor for Magnetic Gradient Energy Utilization: Axial Magnetic Field” Presented to the Space, Propulsion & Energy Sciences International Forum (SPESIF), February 23-26, 2010, Applied Physics Lab – Johns Hopkins University, sponsored by the American Institute of Physics

## Control Moment Gyroscope – IRI Project has Breakthrough by Demonstrating Boeing's CMG for Transportation with Inertial Propulsion



nce on Future Energy - COFE12 Aug. 14, 2020 Friday

**COFE12**  
Conference On Future Energy

### Servos Running/Gyros Running

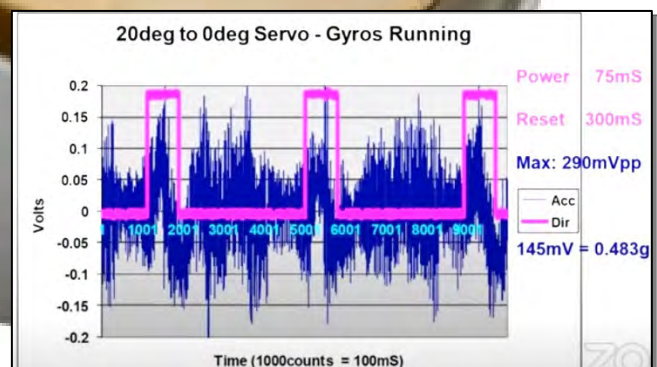
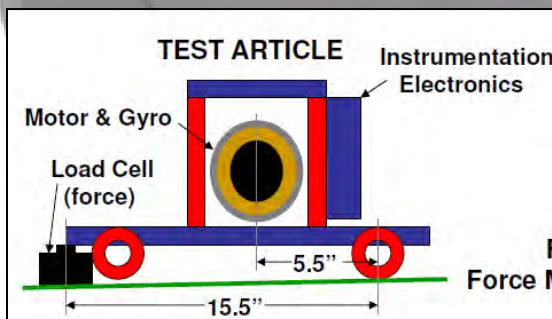
Ma (14.33oz) Ra (1.96") Acceleration Calculation  
(75mS) T (20deg)  $\theta$

$$\text{Force(pk)} = \frac{3.2376e-4 * Ma * Ra \sin(\theta)}{T^2} \text{ [lbs]} = 0.55 \text{ lbs}$$

Ma = Mass of gyro assy [14.33oz]  
Ra = Radius of gyro assy [1.96 in]  
 $\theta$  = Servo degrees [20 deg]  
T = Time in seconds [75mS]

Much simpler force calculation

Project Engineer Mike Gamble proved during his COFE12 talk that he can make inertial propulsion work to move a cart on a flat surface! While the basic design (copying Boeing's room size CMG in photo), uses only two gyros in a tabletop version with a 2" pair of gyroscopes, the next phase for 2021 involves at least a 4" pair of gyros to increase the force. His calculated prediction and measured load cell forces (left) match each other within 10% accuracy, producing about 0.55 lb. of peak force, up from 0.4 lb. of force on the first model (see 2019 IRI Annual Report). In that respect, the new design (above) uses plastic for light weight sturdy frame **with NO power to the wheels!** See a COFE12 electrically powered, space propulsion online at: [https://www.youtube.com/watch?v=n1CH9\\_0Fs0E](https://www.youtube.com/watch?v=n1CH9_0Fs0E)



## Quantum Fire Project – Third IRI Project for Testing an Asymmetric Design to Rectify the Microscopic Casimir Force

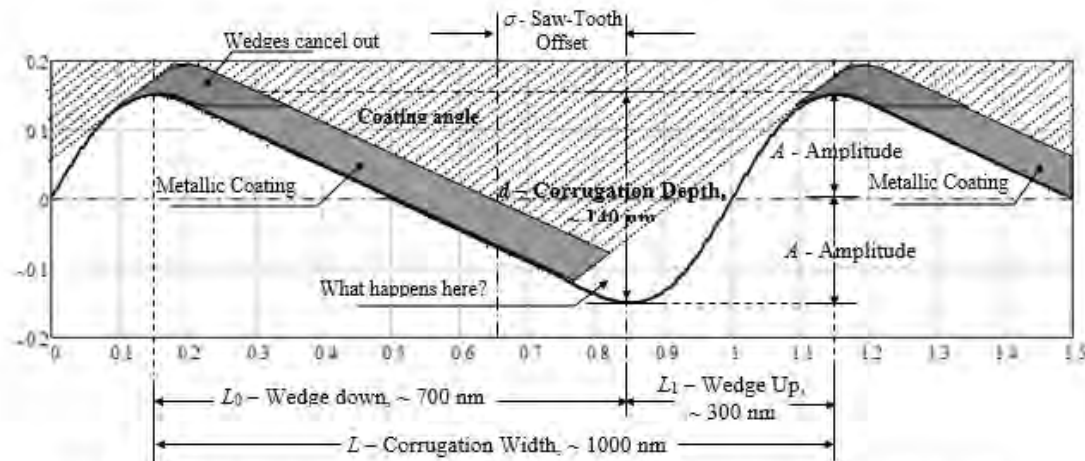


Fig. 3 – Sinusoidal Saw-Tooth groove profile showing possible metal coating – approximately to scale.

The **Quantum Fire Project**, under the direction the Project Engineer Robert DeBiase and Physicist Thorsten Ludwig, PhD, seeks to experimentally test certain force predictions of the proximity force approximation and a theoretical calculation for a perfectly conducting wedge, using an atomic force microscope that has been suitably modified. Preparations for the experiments include carefully manufacturing clean, smooth saw toothed shaped corrugated surfaces on a non-conducting sphere, which then has one slope of the saw tooth coated with metal. This metallically coated diffraction grating, when brought close to a metallically coated un-corrugated flat plate will create wedge shaped cavities (see diagram above). The experiment will then measure the nano-newton lateral **Casimir forces** on the sphere, in the vicinity of the adjacent surface of a diffraction grating with favorable microscopic grooves. The project aims to clarify the practical use of quantum fluctuations and zero-point energy with a 2020 update to use a FULL metallized version.

IRI has directed the team to make use of the nonsymmetric saw-tooth impressions in diffraction gratings to simplify the design. The material needs to be soft enough that impressions can be made by bringing a polymer coated metal ball against a diffraction grating while the ball is attach to an AFM cantilever. Such a process is necessary in order for the grooves to be properly aligned for taking AFM measurements. But it needs to be hard enough that metal can be coated onto one slope of the saw-tooth without damaging the sawtooth groove, thus creating the asymmetric propulsive Casimir force on each wedge which are expected to add up to a significant and measurable summation. Calculations have been made for the theoretical lateral forces to be expected for the arrangement using the perfectly conducting wedge theory. If lateral forces are proven to be present, fulfilling theoretical predictions, a prototype development of a **force production engine** can proceed, and commercial applications will be explored.



## **Five Climate Articles, Book Chapters Published by IRI President**

**Book Publisher International**  
Innovative Science, Technology, Medicine,  
Humanities & Commerce book publisher.

ABOUT ▾

### **Current Perspectives to Environment and Climate Change Vol. 4**

**Dr. Huan Yu, (Editor)**  
Associate Professor, School of Earth Sciences, Chengdu University of Technology, China.

*Short Biosketch*

**E. Yu. Tkachenko**  
Department of Antarctic Geocology, Institute of Geological Science, NAS of Ukraine, Gonchara Str., 55-B, 01054, Kyiv, Ukraine.

**A. O. David**  
Department of Civil Engineering, Olabisi Onabanjo University, Ibeju Campus, Ogun State, Nigeria.

**Thomas F. Valone**  
Integrity Research Institute, Beltsville Maryland, USA.

**J. C. Agunwamba**  
Department of Civil Engineering, University of Nigeria, Nsukka, Enugu State, Nigeria.

**Thomas F. Valone**  
Integrity Research Institute, Beltsville Maryland, USA.



**Current Perspectives to Environment and Climate Change**  
Vol. 4

**Chapter 3**  
Print ISBN: 978-93-89816-72-3, eBook ISBN: 978-93-89816-73-0

**Global Warming, Carbon Dioxide, and Sea Level Predictions Based on Paleoclimatology**

Thomas F. Valone<sup>1\*</sup>  
DOI: 10.9734/bp/cpecc/v4

Copyright (c) 2020 Authors. The licensee is the publisher (Book Publisher International).

This is one of several articles and book chapters on the subject of the real cause of global warming. It is hoped that the simple, inextricably tight, lockstep connection between global CO<sub>2</sub> values and global temperature, delineated and publicized by Dr. James Hansen and others, will finally create an urgency in the minds and hearts of all nations, so that **global atmospheric carbon capture by the gigaton** can begin in earnest. This can be in parallel with carbon-free fuels, zero carbon emissions, renewable energy, and even negative carbon emissions, all implemented worldwide. Hundreds of gigatons of CO<sub>2</sub> must be removed from the earth's atmosphere to get to the source of the hothouse effect. Just blocking sunlight temporarily or planting lots of trees won't solve the intrinsic heat production from CO<sub>2</sub>. The "million tons of CO<sub>2</sub> per year" being captured by Chevron, at a cost of a billion dollars as advertised, will not slow down global warming at all but it is a start in the right direction. [www.ProjectVesta.com](http://www.ProjectVesta.com) and **Carbon Engineering** are much closer to the **gigaton level** of carbon dioxide capture than anyone else on earth at the end of 2020. – TV



## Global Warming, Carbon Dioxide, and Sea Level Predictions Based on Paleoclimatology

Thomas F. Valone<sup>1\*</sup>

DOI: 10.9734/bpi/cpecc/v4

### ABSTRACT

Climate articles and publications continue to erroneously suggest a one and a half (1.5°C) to two degrees (2°C) Celsius as an achievable global limit to climate change [1]. A comprehensive review has found that observationally informed projections of climate science underlying climate change offer a different outlook of five to six-degree (5–6°C) increase as “most accurate” with regard to present trends, climate history and models, yielding the most likely outcome for 2100 [2]. A significant causative triad from 1950 to the present has been identified: The tripling (3x) of world population; the quadrupling (4x) of carbon emissions; and the quintupling (5x) of energy consumption. This paper presents a quantitative, linear global temperature link to carbon dioxide levels, which has a short temporal feedback loop. The Vostok ice core temperature and CO<sub>2</sub> values for the past 420,000 years, with sea level estimates have produced “Hansen’s Graph” [3]. Analysis results in an equation for global average temperature change and an indebted sea level rise, from any CO<sub>2</sub> change. The best-performing climate change models and observational analysis project more warming than the average model often relied upon [4]. World atmosphere, temperature, and sea level trends for 2100 and beyond are examined. A CO<sub>2</sub> experimental analysis proves its dramatic heat-entrapment versus air which relates to the global atmospheric system. Policy-relevant climate adaptation, including carbon capture, positive individual action, zero and negative emissions are reviewed, including Hansen (1988) projections.

**Keywords:** *Climate change; temperature; thermal forcing; carbon dioxide; PETM; carbon emission; carbon capture.*

### 1. INTRODUCTION

Fossil fuel carbon emissions and emission rates are now both increasing annually in several major countries in the world.

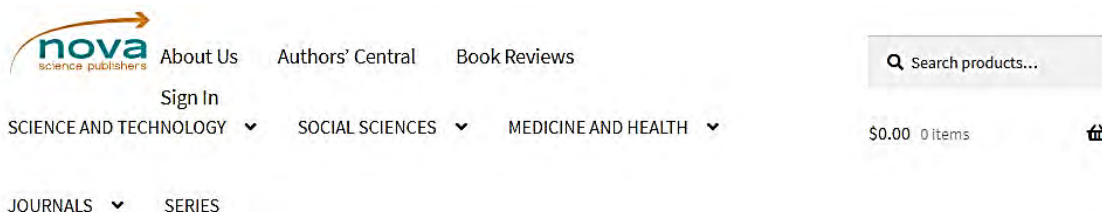
The unmitigated growth of carbon emissions worldwide reached a record 37 billion tons of CO<sub>2</sub> (in one year) at the end of 2018, with the U.S, India and China leading the increase [5]. The total carbon emission growth in 2017 was only 1.7 percent while carbon growth rate for 2018 shown in Fig. 1 increased 2.7 percent. As for China, coal accounts for about 60 percent of China’s total energy consumption [6].

Fig. 2 is a closeup of the world’s steadily increasing, heat-trapping, atmospheric CO<sub>2</sub>, recorded through NOAA’s Earth System Research Laboratory at the Hawaiian Mauna Loa Observatory since 1959. The monthly values are seen in Fig. 2 as seasonally oscillating red dots with dashes in between. The black dotted line with the square symbols represents the *averaging correction* for the seasonal cycle. The latter is determined as a moving average of seven adjacent seasonal cycles centered on the month to be corrected, except for the first and last three and one-half years of the record, where the seasonal cycle has been averaged over the first and last seven years, respectively. The amount of CO<sub>2</sub> emissions from fossil fuel burning comes from the Open-source Data Inventory for

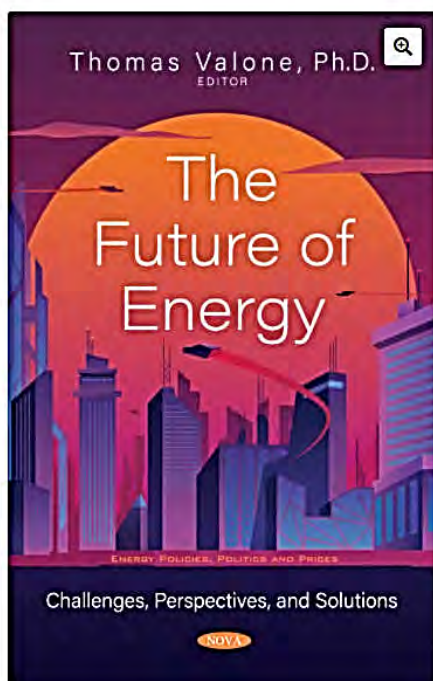
<sup>1</sup>Integrity Research Institute, Beltsville Maryland, USA.

\*Corresponding author: E-mail: [iri@erols.com](mailto:iri@erols.com)

## The Future of Energy was also Edited and Published in 2020



Home > Shop > Imprints > Nova > The Future of Energy: Challenges, Perspectives, and Solutions



### The Future of Energy: Challenges, Perspectives, and Solutions

\$230.00

**Thomas Valone, PhD (Editor)**

President, Integrity Research Institute, Beltsville MD, US

**Series:** Energy Policies, Politics and Prices

**BISAC:** SCI024000

The anthology entitled, "The Future of Energy: Challenges, Perspectives, and Solutions" includes a wide range of topics related to the probable and also possible future developments of energy technologies. The collection of papers offers a series of unprecedented perspectives on energy science, unavailable elsewhere. The authors have considered developments in renewable energy, novel energy discoveries, environmental climate futures, possible technological advances, temporal distortion, and gravitational electromagnetism. Specific energy inventors reporting breakthrough results have also been showcased in individual chapters, including Searl, Manelas, Kozyrev, and Storms. The future of energy is presented with possible scenarios such as with microgrids, solar systems, fusion-fission reactors, smart cities, energy storage, electric vehicles, low energy nuclear reactors, electromagnetic devices, proton and electron conversion, theoretical antigravity, and time manipulation. Several interesting models have been considered to provoke and stretch the reader's imagination and awareness of the study of the future.

This collection of works provides a broad range of conceptual understanding of energy conversion that is both conventional and unconventional. Each chapter includes a significant use of graphs and charts, as well as explanatory equations where necessary, with plenty of vital references and links to substantiate any new scientific concepts and assist further research. More than one new phenomena of electrical power production have been discovered and the results documented in detail within the pages of this anthology. While the time schedule and specific cause of global warming is detailed, the plan for advanced energy applications is also explored.



# ***The Future of Energy: Challenges, Perspectives, and Solutions***

## **CONTENTS**

### **Preface**

#### **1 Future Energy is Almost Here Along with Increasing Global Heat**

*Thomas Valone*

#### **2 Smart Cities and Energy Storage**

*Antonio Colmenar-Santos*

#### **3 Energy Resiliency and Microgrids**

*Antonio Colmenar-Santos*

#### **4 Methods For 1D ZnO Nanostructures and Potential for Solar Cells**

*Kelvii Wei Guo*

#### **5 Possible Development of a Fusion-Fission Reactor as a Clean Energy Generator**

*John Brandenburg*

#### **6 Low Energy Nuclear Reactions Research Documentation Initiative**

*Thomas Grimshaw*

#### **7 Arthur Manelas' Electric Vehicle and Related Efforts**

*William Zebuhr*

#### **8 Questioning the Future of Solar Energy**

*Judy Kosovich*

#### **9 Nikolai Kozyrev, His Theory of Time and the True Position of Stars**

*Thorsten Ludwig*

#### **10 Nonlinear Electromagnetic Energy Device and Potential Explanations**

*Paul Murad*

#### **11 Gravity/Anti-Gravity, Libration Points, & Relativity: Exposing Light on Dark Matter**

*Paul Murad*

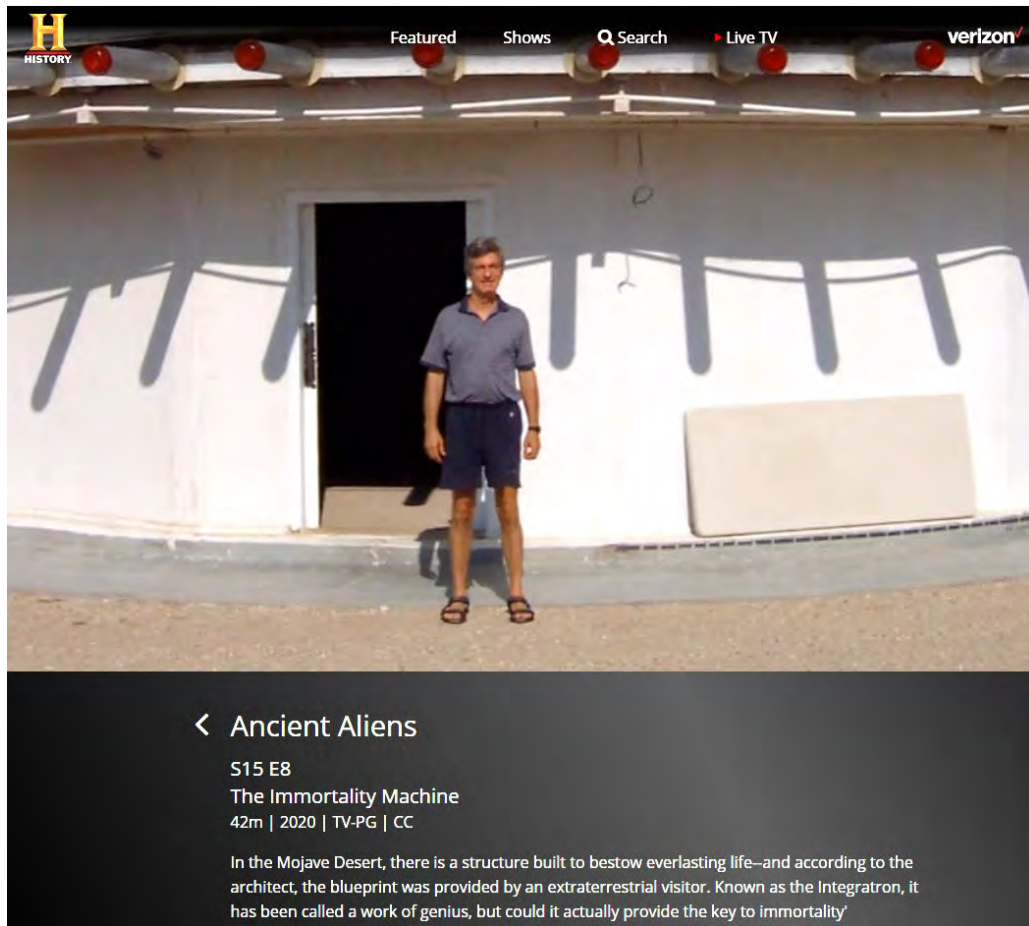
#### **12 Proton and Electron Production and Destruction as Sources of Energy**

*Ray Fleming*

### **Index**

**Ed. Note:** As per the publisher, after March, 2021, this book may be archived on an appropriate site for personal use. Therefore, IRI plans to post the contents on [ResearchGate.net](https://www.researchgate.net) under Valone's name.

## Valone Appears on History Channel's **Ancient Aliens**



Early in 2020, the episode that Dr. Valone pitched for a few years to the Prometheus Productions company finally aired: "The Immortality Machine." Months earlier, the film crew invaded the laboratory at IRI to record interviews for two days and get closeups of the model of a completed Integratron that Valone was hired to build in less than two weeks. The story centers around George Van Tassel, who had a UFO experience on his property near Giant Rock in Landers CA and then sponsored UFO conferences there which attracted up to 11,000 people at its peak in the 1950s. The proceeds were used to build a healing chamber that could rejuvenate people, based on some ET guidance but mostly Tesla high voltage inspiration. The technology involved in the Integratron is closely associated with an atmospheric electrostatic charge accumulator (works well in the desert) that will feed a multicoil central assembly which is supposed to oscillate and perhaps feed a Tesla secondary coil around the center column. Fortunately, no metal nails were used in the construction of the Integratron which is 57 feet in diameter and two stories high. Above is a photo of Valone outside the building about ten years ago when researching the construction and making measurements of the design inside. Above him are the dirods that aid in the atmospheric electrical charge accumulation.

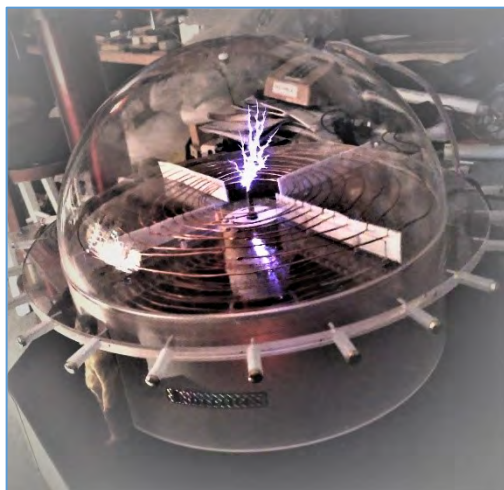


## S15 Episode 8 includes a demonstration of the Valone model of the proposed completed Integratron with a Tesla coil in center

See this History channel's Ancient Aliens S15, E8 for FREE, with advertising, from its website: <https://play.history.com/shows/ancient-aliens/season-15/episode-8>



When you view this video, it is suggested to go for the *Interactive Advertising* and click so that the 'watch the film' link will pop up in a few seconds. This is faster than the three-minute ads which are the default.



This model also included a miniature Lakhovsky Multiwave Oscillator antenna, just like the one in the ceiling of the ground floor of the real Integratron.



The 25-minute 1964 interview online of George Van Tassel is the most convincing and authentic video from that period [https://www.youtube.com/watch?v=wZbFsFWk\\_c](https://www.youtube.com/watch?v=wZbFsFWk_c) . In a portion of it shown on the Immortality Machine episode, he describes the UFO experience he had as well as the details of the Integratron design. Dr. Valone used a portion of this video in his *Ufology Textbook* presentation in 2020 at the UFO Mega Conference in Nevada as well as on August 15, 2020 at COFE12 (DVD Set from IRI).

However, there are always segments of submitted photos and books that are left on the cutting floor by the producers. In the next page we can see what is perhaps the most extraordinary photo of a daytime hovering UFO ever taken. We feel it is of top quality because Valone interviewed the author personally more than once and because the deputy sheriff who took the picture also posed with the photo that he took to authenticate the experience. One can also see the intriguing and unusual energy force field projected below the craft that illuminates the area directly under the UFO, at Van Tassel's UFO Convention.

Another aspect of Van Tassel was his unique rapport with the “Saucer beings” who flew over during his UFO conventions

## *Sunburst: Return of the Ancients*

By Norman Paulsen



A ship over Giant Rock,



And the deputy sheriff who took the picture.

Giant Rock, Calif.  
saucer, photo, &  
deputy sheriff who  
took the photo

65

The two photos above were taken at one of Van Tassel’s **UFO Conventions** at Giant Rock.

To explain a little background, Valone read the book, *Sunburst: Return of the Ancients*, where these photos are published in 1980 and went to California to see the Sunburst Community and *George Van Tassel’s son-in-law*, Norman Paulsen who was the author. The reason was that Norman described in the book a rotating magnetic disk machine on a UFO *that he experienced* and tried to build a replica, which turned out later to be a homopolar generator. Then, by good fortune, Valone convinced his professor at the State University of NY at Buffalo to let him build one for his Master’s Degree project in physics, which became the book, *The Homopolar Handbook*, continuing this unusual story, also recited for a Citizen’s Hearing Press Conference at the National Press Club in 2013.

Perhaps the best book authored by George Van Tassel is *I Rode a Flying Saucer* which contains the transcripts of his small group sessions under Giant Rock that predicted the historic three-day “Buzz on the Capitol” in July, 1951, explained on the next page. It was the first and only time when multiple UFOs appeared around the US Capitol and National Airport on several days in July, 1952, with advance notice through George Van Tassel. However, rather than open the US Government to some sort of acknowledgement, acceptance, and perhaps an anticipated welcome the visitors expected, the US Air Force grew more and more hostile toward the UFOs as the days wore on. On the other hand, General Samford’s public address online, was a surprisingly candid summary of the events.

Next two extraordinary slides are from Valone in two *Ufology Textbook* shows in 2020.



## ***I RODE A FLYING SAUCER* BY GEORGE VAN TASSEL – HIS FIRST BOOK** and quite possibly the most scientific, with E.T. messages



### George Van Tassel

- learned psychic channeling of possible **human ancestors of earth** starting in 1951, calling them “Saucer beings” and  
← each session transcribed into this first book of his.

- APRIL 6, 1952 Session: **“Your pentagon will soon have much to muddle over. We are going to give this globe a buzz. I hope they do not intercept us from in front.”**

- JULY 12, 20-21, and 26-28, 1952:
- Saucer beings also explained the purpose of their saucers in earth’s skies: **Hydrogen is a “life giving element”**. They are “concerned with ... deliberate determination to extinguish humanity and turn this planet into a cinder... **this condition occurred before in this solar system and the planet...was torn to bits. We are determined that it shall not happen again.**”
- → this explains the Asteroid Belt!

**U.S. exploded the first Hydrogen Fusion Bomb in the Pacific Nov. 1, 1952**

Being diligent about trying to communicate to the US military, George cooperated willingly when instructed by his contacts to send a certified letter with return receipt requested, to the US Air Force Office in Washington DC *a couple of weeks ahead of* the Buzz on the Capitol, which he did, as recorded in the book with the recipient’s name.

## ***I RODE A FLYING SAUCER* BY GEORGE VAN TASSEL – HIS FIRST BOOK** and quite possibly the most scientific, with E.T. messages

- JULY 20-22, 1952: Project Blue Book receives UFO reports from 24 different states in the US
- JULY 26-28, 1952: A “tidal wave” of UFO sightings over Washington DC
- By JULY 29, 1952: “Jets told to shoot down ‘flying discs’”
- JULY 29, 1952: **General Samford** gives an unprecedented Press Conference on the flying saucer situation and denies any “secret development ” of the United States



The Cedar Rapids Gazette (Cedar Rapids, Iowa), page 1, July 29, 1952



The Scranton Tribune (Scranton, Pennsylvania), page 1, July 29, 1952

**RADAR SPOTS MORE  
FLYING “WHATZITS”  
OVER WASHINGTON**

### **Radar Spots ‘Flying Saucers’ In Backyard Of Natl. Capital**

By JACK RUTLEDGE  
WASHINGTON (AP) — The Air Force today investigated reports that several “flying saucers” had been spotted by radar virtually in its own backyard on the outskirts of the nation’s capital.  
Not only were unidentified objects seen on radar—indicating actual substance instead of mere light—but two airline pilots and a newsman saw eerie lights fitting the general description of flying saucers the same night.

Officials could not immediately agree on whether this was the first time radar has picked up flying saucers. Some said it was. All agreed it was unusual.

The objects also were different from the average reported saucer in that they traveled at a relatively slow speed, as well as later disclosing the customary burst that far outspeeds normal airplanes.

identified images on one of his radars — the area surveillance scope, with a range of possibly 70 miles.

The images were slow-moving, going probably 100 to 150 miles an hour. And they were flying in the vicinity of nearby Andrews Air Force Base.

The control center, operated by the Civil Aeronautics Administration, notified the Air Force and also asked planes in the air if they could see anything.

That was around midnight. Capt. S. C. (Casey) Pierneman of Detroit, piloting Capital Airlines Flight 807, southbound from National Airport, soon reported seeing seven objects between Washington and Martinsburg, W. Va. He said they changed pace, sometimes moving at tremendous speed, at other times hanging almost motionless.



## EM Pulser Model 78 Introduced After Radio Appearance

On September 28, 2020, Dr. Valone was a guest on the Coast-to-Coast AM radio show with George Noory for the third time. The show was called “Energy Technology & Healing” and anyone can still listen to the two-hour interview online at <https://www.coasttocoastam.com/show/2020-09-28-show/>. More images are online.

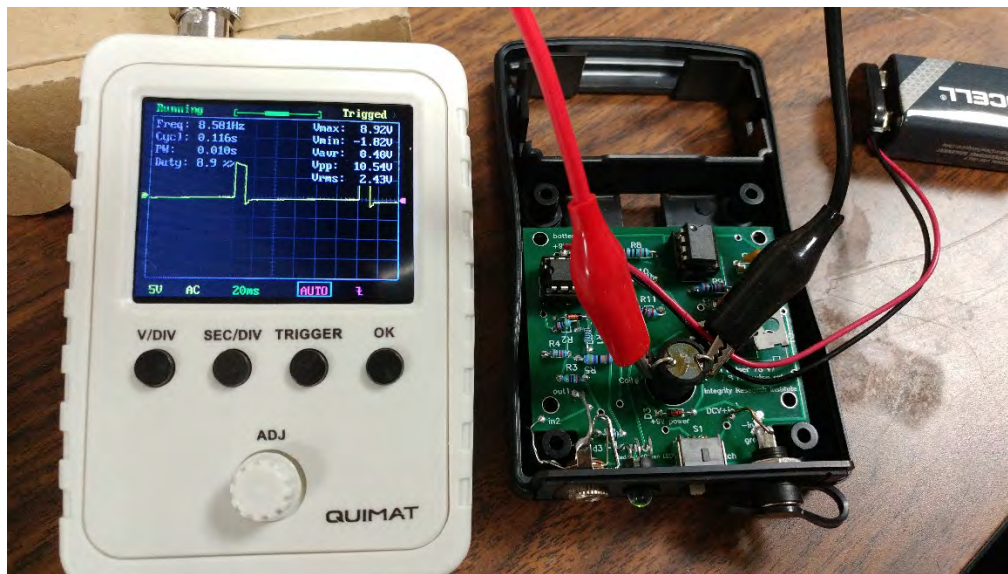


As before, it was a huge success since the show is syndicated across the country on hundreds of stations, with over a million listeners. IRI received over one hundred advance orders for the new 7.8 Hertz model of EM Pulser that Valone had been designing for years. With a promise of shipping right after November 1, 2020, the prototype was based on the existing kilohertz model but a new 7.8 Hz pulse rate with a nanosecond rise time needed to be finalized and the printed circuit board designed and sent for manufacture. IRI was successful in fulfilling the orders in November and completing about 150 orders by the end of December, 2020.



## IRI's EM Pulser Model 78 Can Claim *Cardioprotection from Stress* Based on Published Study in *Nature*

The study below from 2019 was the inspiration for the development of a Schumann resonance **7.8 Hz** pulsed electromagnetic field (PEMF) therapeutic model of the **EM Pulser**. IRI was also able to arrange for an unusual, overseas supply of AC Rechargers that actually recharge the internal 9-volt battery by just plugging the unit into the AC Recharger much like a cell phone is recharged periodically. A sharp leading edge of the pulse emanating from the internal magnetic coil is shown on the testing oscilloscope below. Now that we have tight control over tolerances of 2.5%, IRI can meet the **cardioprotection criterion** of a *pulse rate between 7.6 and 8.0 Hz* and thus claim the health benefit 😊.



## SCIENTIFIC REPORTS

Nature magazine, (2019) 9:1645 | <https://doi.org/10.1038/s41598-018-36341-z>

OPEN

### Cardioprotection from stress conditions by weak magnetic fields in the Schumann Resonance band

ed: 14 September 2018

ed: 19 November 2018

ed online: 07 February 2019

G. Elhalel<sup>1</sup>, C. Price<sup>1</sup>, D. Fixler<sup>2</sup> & A. Shainberg<sup>3</sup>

The Schumann Resonances (ScR) are Extremely Low Frequency (ELF) electromagnetic resonances

**Magnetic 90 nT field study. 7.8 Hz +/- 0.2 Hz frequency-dependent decrease in calcium transient after 30 minutes, even while under induced hypoxic stress.**



## Twelfth Conference on Future Energy (COFE12) Held Online

**12<sup>TH</sup> CONFERENCE ON FUTURE ENERGY**  
*August 14<sup>th</sup>-15<sup>th</sup>, 2020, 10-6 pm EDT*  
*ZOOM Virtual Conference Online*

**COFE12**

**FuturEnergy.org**  
**FREE ADMISSION: But you must register**  
**in order to receive free link!**  
**888-802-5243 or 301-220-0440 Fax: 301-513-5728**  
**IRI, 5020 Sunnyside Av #209 Beltsville MD 20705**

			
Dean Radin PhD	Ray Fleming	Tom Valone PhD	Col. Eric Felt
			
Ed Storms PhD	Paul Murad	William Alek	Mike Gamble

**SPECIAL SPEAKERS:**  
**Dean Radin PhD --- Col. Eric Felt USAF**

Invited Speakers: John Brandenburg PhD - Bob DeBiase  
Dr. Thorsten Ludwig, Moray King

For the first time, in the midst of the pandemic, IRI made the decision not to cancel its conference but to hold it online instead, since all of the COFE12 speakers were onboard and available. This turned out to be a good decision and each one was given the chance to practice online with Dr. Valone through the use of **Zoom.us**. Some also chose to record their presentation ahead of time, which was then opened and played during the conference as if the live person was there. A few speakers who did this also were available online afterwards for Q & A which also went smoothly.

Some of the highlights from the conference shown on the following pages are lectures by Dr. Valone, inertial propulsion demonstrations by Mike Gamble and Ray Fleming, an enlightening and unique presentation by USAF Col. Eric Felt, and an autobiographical surprise parapsychology slideshow from Dr. Dean Radin from the

Institute for Noetic Sciences, with lots of double-blind studies that he sponsored and published. The Friday COFE12 event is free and online at [https://www.youtube.com/watch?v=n1CH9\\_0Fs0E](https://www.youtube.com/watch?v=n1CH9_0Fs0E). **COFE12 DVDs are also available.**

**The COFE12 speakers included:** Colonel Eric Felt, Director of AFRL Space Vehicles Directorate and Dr. Dean Radin, Chief Scientist, Noetics Institute. Over 100 registrations were accepted for Zoom live streaming, with overflow to [www.tinyurl.com/IRIYouTube](http://www.tinyurl.com/IRIYouTube). In addition, Ray Fleming is presenting on "Electrons, protons, and energy produced together from the zero-point field". IRI also scheduled Dr. Thorsten Ludwig live from Germany (future energy/ZPE/Casimir) even when he was not allowed to enter the US physically due to COVID, Mike Gamble (inertial propulsion, formerly with Boeing), Dr. Ed Storms (formerly with Los Alamos Labs), Paul Murad, Tom Valone, William Alek, and more.



Dr. Tom Valone's "Climate Need for Clean Energy" presentation, expanded from his IEEE Science and Tech slideshow, includes practical suggestions for a white roof and phase change insulation, reducing air conditioning costs as the earth heats up. **InsolCorp's** InfiniteR insulation (which outperforms any glass, fiberglass, or styrofoam) is available through distributors and holds heat or cold by melting or freezing at a chosen temperature.

## IEEE ISTAS 2019 Solutions, Suggestions, Adaptations besides renewables

### Phase Change Materials

Absorb and release energy naturally - without consuming energy.

**Phase change insulation** is a vital adaptation technique for the immediate future and beyond. **InsolCorp** leads the industry with **InfiniteR** insulation -- only one centimeter thick has **100 BTU/ft<sup>2</sup>** of energy storage or **314 Watts/m<sup>2</sup>** of energy.

**Infinite** | **Infinite** | **Infinite** | **InfiniteR**

24" - 21C M100    24" - 23C M100    24" - 25C M100    24" - 29C M100

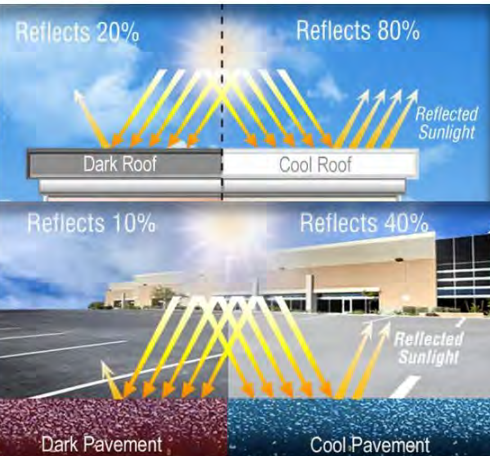
21°C 70°F    23°C 73°F    25°C 77°F    29°C 84°F

Choose your preferred TEMPERATURE for the phase change above. It will **maintain that temperature INDOORS (+/- 2 °F)** while the outdoors swings wildly with 100 °F hot and 20 °F cold. Like ICE, it freezes and thaws at the chosen TEMPERATURE above.

15 - 16 November 2019 COFE12 2020 August 14-15, 2020 IEEE ISTAS

### Western Colloid Fluid – Cool Roof System

- High Reflectivity
- Reduces energy costs by 30%



Valone also explained Erik Christensen's demonstration experiment and how a little bit of CO<sub>2</sub> causes light from a flood lamp to heat up moist air much more, since the added CO<sub>2</sub> inside the vessel traps the IR heat portion of the light and blocks its transmission.

### Alka Selzer Water vs. Plain Water Experiment

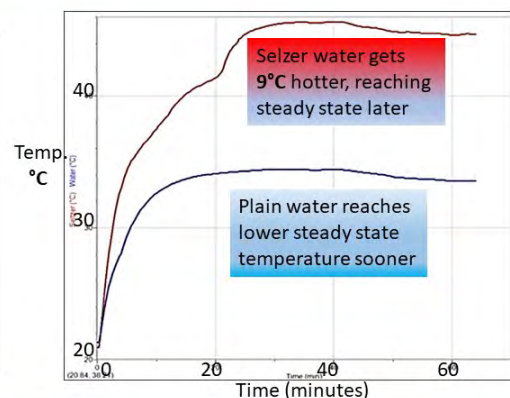
(Selzer water makes CO<sub>2</sub> bubbles – a heat-trapping gas)

Erik Christensen, NWS JetStream Online School for Weather, 2011, YouTube




Erik Christensen  
Published on Jun 13, 2011

This discusses a short, but very effective and dramatic demo to show the effect on temperature of increased levels of carbon dioxide.



IEEE ISTAS 2019


Copyright 2019 Authors



Ray Fleming

## Fleming-Popa Fusion

- Deuterium fusion at ~80 kVp AC
- 45 R/hr (~0.45 Sv/hr) @ 2 meters.
- Eberline PNR-4 neutron meter went off scale during this run.



Ray Fleming demonstrated deuterium fusion in his slide presentation with a neutron meter.



## Conference On Future Energy

Test Article Side View Showing Both Offset Gyros




copyright mg



Mike Gamble

Mike Gamble explained his specific goals with his presentation on the Controlled Moment Gyro (CMG) experiment that has been ongoing for several years. Here we see his dramatically lighter and larger cart with both offset gyros visible. Moving in opposite directions, his force equations resolved into a net positive force which was confirmed, for the first time, with a video at the end of the cart moving on roller skate wheels on a flat horizontal surface. This breakthrough proves that such an electric propulsion method really works and could be the future of transportation perhaps, especially in space.






- □

## Asymmetric Impulse Drive

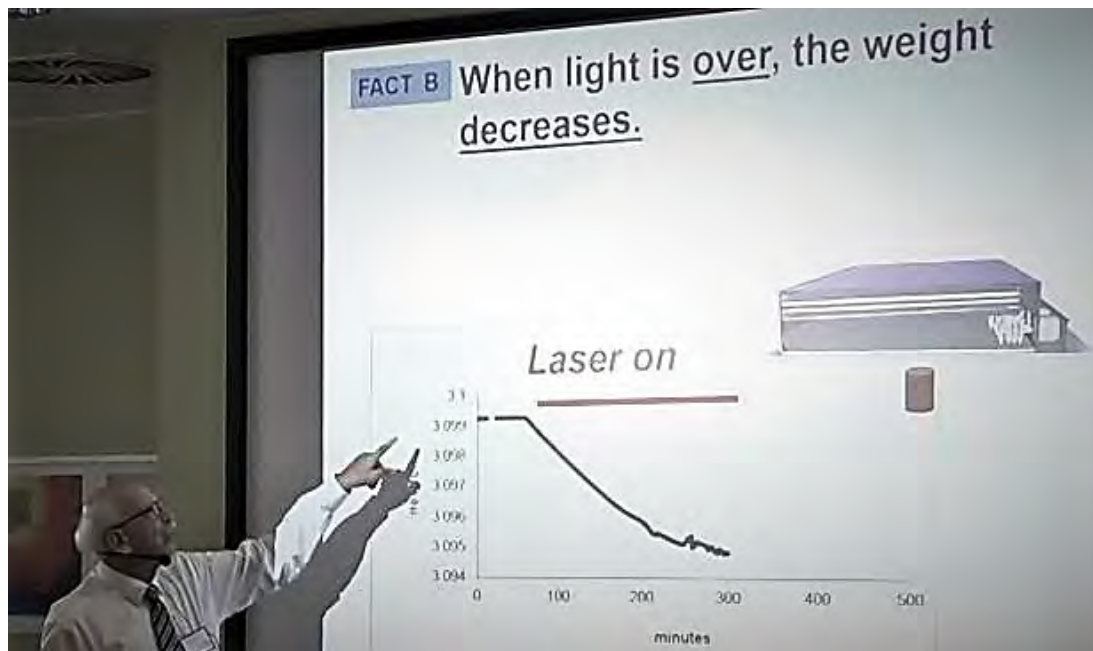
(Inertial Engine E-13)  
Engine Weight = 8.7 lbs.

Unlike my other drives, this engine was designed to be adjustable in all facets. But I had to go back to a dual voltage power source (PS-5): One fixed for the shifter and a variable for the motor so that I could fine-tune rotor speed.



10/30/2017

Steve Hampton also had interesting inertial propulsion impulse devices to demonstrate as well. Here one is shown with unbalanced weights that rotate in opposite directions.



Professor Louis Rancourt proved his amazing effect of laser light on the weight of various objects, which was quite interesting because of precise measurements.



ESP?

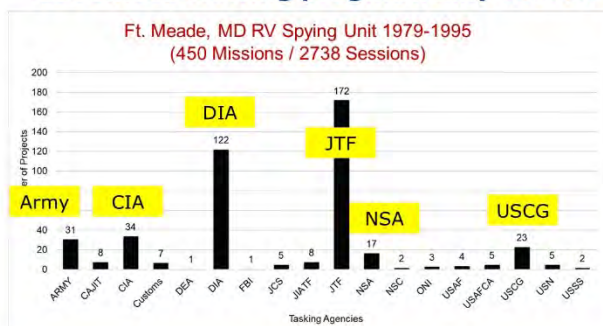


Is there any scientific evidence for ESP?



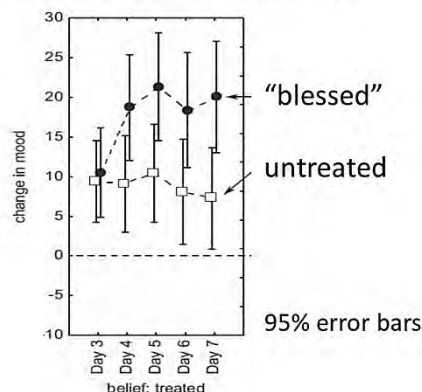
Yes. Lots.

Is remote viewing pragmatically useful?



Tea

double-blind placebo control



Intention significantly improved growth of seeds

Shiah, Y.-J., Hsieh, H.-L., Chen, H.-J., Radin, D. I. (2017). A randomized, controlled trial of the effects of intentionally treated water on growth of *Arabidopsis thaliana* seeds with cryptochrome mutations. *Explore*.

Dr. Dean Radin, from the Institute Of Noetic Sciences (IONS), covered a wide range of his testing for psychic phenomena. With four slides above, it included the relatively unknown military pursuit of remote viewing (the Number of Projects are plotted on the left above vs. the U.S. Agency name), which returned useful information over hundreds of missions. Also here on the right is the statistically significant improvement in mood from a Buddhist monk blessing some tea vs. untreated tea (double-blind study), and below that one, the published study of the growth of seeds with intention, which surpassed the growth of seeds without any conscious intention.



ORIGINAL RESEARCH ARTICLE

Front. Psychol., 17 October 2012 | <https://doi.org/10.3389/fpsyg.2012.00390>

## Predictive physiological anticipation preceding seemingly unpredictable stimuli: a meta-analysis

Julia Mossbridge<sup>1\*</sup>, Patrizio Tressoldi<sup>2</sup> and Jessica Utts<sup>3</sup>

$$p < 2.7 \times 10^{-12}$$

109,818

TOTAL VIEWS

Am J Psychol 253

View Article Impact



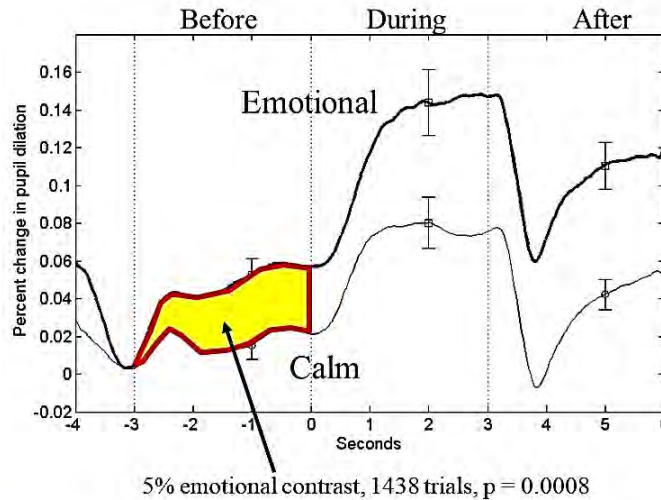
This article has more views than 99% of all Frontiers articles.

IONS

© Institute of Noetic Sciences

Probably the most challenging intellectually, since most people are still using a classical physics frame of mind, is the well documented experiment seen above, measuring up to a

three (3) second effect *PRIOR* to an emotional event. This was most pronounced in “top gun” jet pilots who apparently excelled in their skill because of this quantum mechanical ability, as seen below. (In quantum mechanics, there is no preferred direction of time so for example, an intense emotional event seems to have an acausal effect before and after.) Note that emotional response was precisely measured objectively from pupil dilation.



D. Radin and A. Borges, "Intuition through time: what does the seer see?," *Explore* 5, 200-211 (2009).

IONS

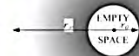
© Institute of Noetic Sciences

## Breakthrough Scientific Paper Published on academia.edu

- Discovered **NEW** properties of the Electron, which is governed by the inverse square laws.
- Classical solution of “**Quantum Tunneling.**”
- Biot-Savart Law embodies “**Special Relativity.**”
- Discovered **Phase Angle Change** of Electron – this is called **Torsion**, which creates “**Quantum Tunneling Effect.**”.

Aug 15-2020

The Electron is a Spherical Spinning Superluminal Sub-Quantum Electromagnetic Plenum with a Hollow Core.



### Properties:

1. Has Surface Area, But No Volume. Empty Spinning Vortex Governed by Inverse Square Laws – No Singularities Allowed.
2. Electric Charge & Magnetic and Mass Fields are Outside it's Radius,  $r_0$ .
3. Energy – Mass Relationship is contained in it's Angular Momentum,  $L_0$ .
4. Electron can rotate in 12-Dimensional Space.

©2019, AuroraTex, Inc.



Bill Alek talked about “Harnessing Electron Spin” that included handheld demonstrations as well as analysis of Tesla’s US Patent #568,176 that has opposing magnetic fields and of the Electron Spherical Spin article above from [www.academia.edu](http://www.academia.edu) .

## Research Center Kolberg, Germany



Youtube 10 min Video: Research Center Kolberg

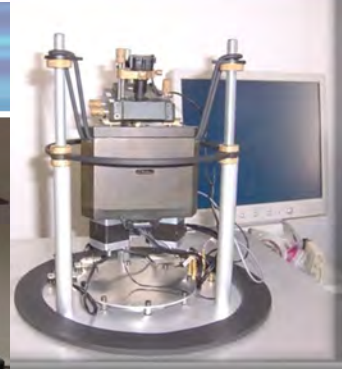
<https://www.youtube.com/watch?v=F4ol4kX735Q>

Dr. Thorsten Ludwig talked about zero-point energy and the quantum vacuum experiments that he conducts at his Research Center in Germany. He has use of an atomic force microscope (AFM) which is extremely sensitive, so the DeBiase Casimir Force experiment, which IRI has contributed support to, has been conducted there. Ludwig also is using their Ion Trap for a psychokinetic experiment for moving ions.

Vacuum AFM system



Atomic force microscope



Our ion trap





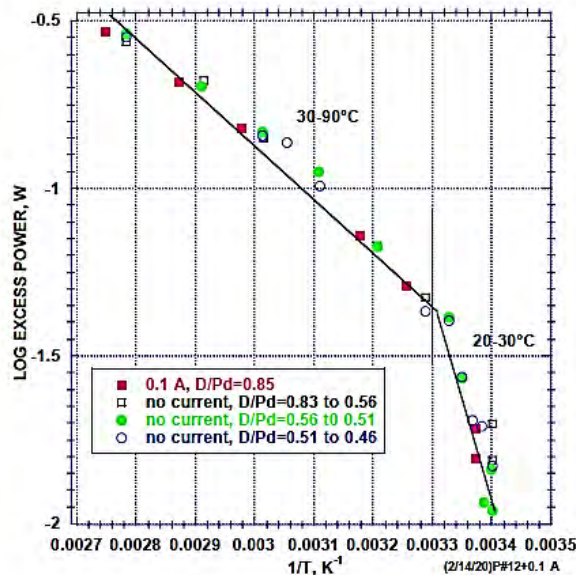
# Source of energy?

Reaction	MeV	Hot-fusion Fraction	Cold-fusion Fraction
$D+D = {}^4\text{He} + \text{energy}$	23.8	<1%(gamma-ray)	>99.9%(no gamma-ray)
$D+D = \text{Tritium} + \text{proton}$	4.03	50%	rare
$D+D = \text{neutron} + {}^3\text{He}$	3.27	50%	extremely rare

Dr. Edmund Storms, formerly from Los Alamos Research Lab, gave us a repeat performance on his **cold fusion** experience (his last one was at COFE1 in 1999). Above is a good example of why cold fusion is unique. While normal hot fusion almost never produces normal plain helium (“helium-4”) as a by-product without a gamma ray, cold fusion does so in almost 100% of the cases. It therefore can be presumed that the cold fusion phenomenon allows the same 23.8 MeV of energy to go into heat production that would normally exit as a single gamma ray.

## Effect of Temperature

(activation energy = 28.7 KJ/mol)



COFE-12 Conference, Albuquerque,  
NM (8/12-16/2020)



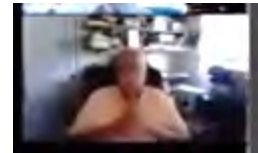
To the left is his summary of many experiments with power output in watts vs. inverse temperature. More power was produced at a lower operating temperature surprisingly, with deuterium on palladium.

## “Gravitation as a Rotational or Vorticity Field”

Twelfth Conference on Future Energy, COFE 12



Paul A. Murad  
Kepler Aerospace  
Midland, Texas



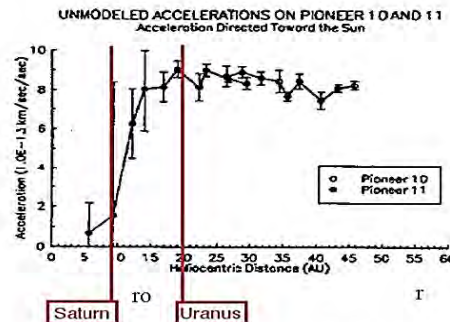
© P.A. Murad, 2020 with permission, [Ufoguypaul@yahoo.com](mailto:Ufoguypaul@yahoo.com),  
Consultant/Kepler Aerospace,  
COFE 12...livestream online... August 14-15, 2020.

1

Paul Murad presented a selection of astronomical examples of gravitational phenomena, including black holes, neutron stars, pulsars, etc. He also proposed a new Gravitational Model that includes the production of gravity waves. Below is part of his discussion of the famous “Pioneer Anomaly” where the acceleration “toward the sun” increased as both spacecraft passed Saturn (causing them to slow down). Various theories have been proposed to account for the effect, mostly connected to heat radiated from the electrical circuits onboard. However, many physicists including Murad still wonder what happened after Saturn’s orbit to trigger such a jump in acceleration.

### Pioneer 10 and 11 Spacecraft

- Jack Sarfatti provided a nice graph showing the unmodeled accelerations on Pioneer 10 and 11 vs. distance from the sun in AU.



Our Conformal Keplerian Solar  
System by Frank Dodd (Tony)  
Smith, Jr. – May-June 2009

$$\frac{\partial^2 \varphi}{\partial t^2} + \left(1 - \frac{r}{r_0}\right) \frac{\partial^2 \varphi}{\partial r^2} = f(r, t) \text{ or like } \frac{\partial^2 \varphi}{\partial t^2} + \left(1 - \frac{v^2}{c^2}\right) \frac{\partial^2 \varphi}{\partial r^2} = f(r, t).$$

31

AFRL

## Space Solar Power

The idea of power beamed from space is not new, but has not been historically feasible. However, recent technology developments have put this concept within the realm of the possible, such as:

- Mass-efficient deployable structures concepts
- Increased efficiency of modern electronics
- Reduced mass, high efficiency solar cells
- Promising low-cost manufacturing approaches in work
- Lower cost per kg to get to orbit
- Solar to RF Sandwich Module – a potentially game changing technology

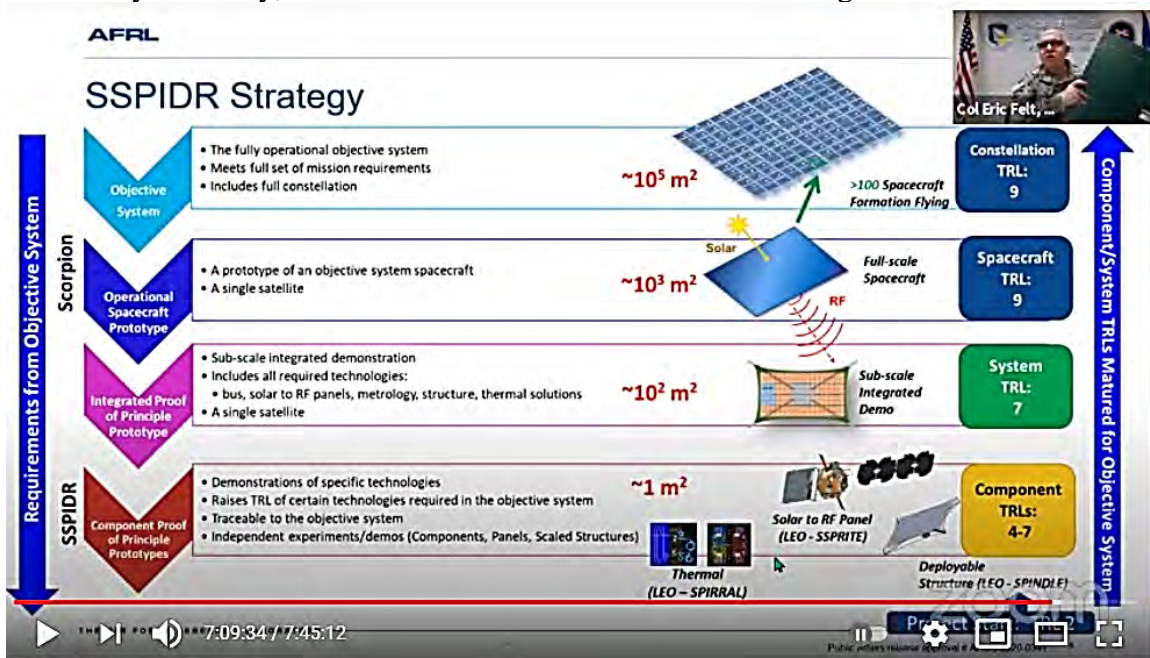


Author: NASA

Despite many concepts of grand scale, nothing of significance has been built, but many different entities are working to prove the feasibility of this concept including Naval Research Laboratory (NRL) who recently launched their version of the sandwich module, the Photovoltaic RF Antenna Module (PRAM).

Col Eric Felt, ...

Col. Eric Felt gave a great presentation detailing eight installations of 1 MW space solar power systems. His slides were approved for release and explained that 10,000 square meter panels are achievable in four stages, starting with the one square meter prototype, which he held up in his hands to show all of us (see below). He also explained that it is about ten years away, based on radiation-hardened solar cell design.

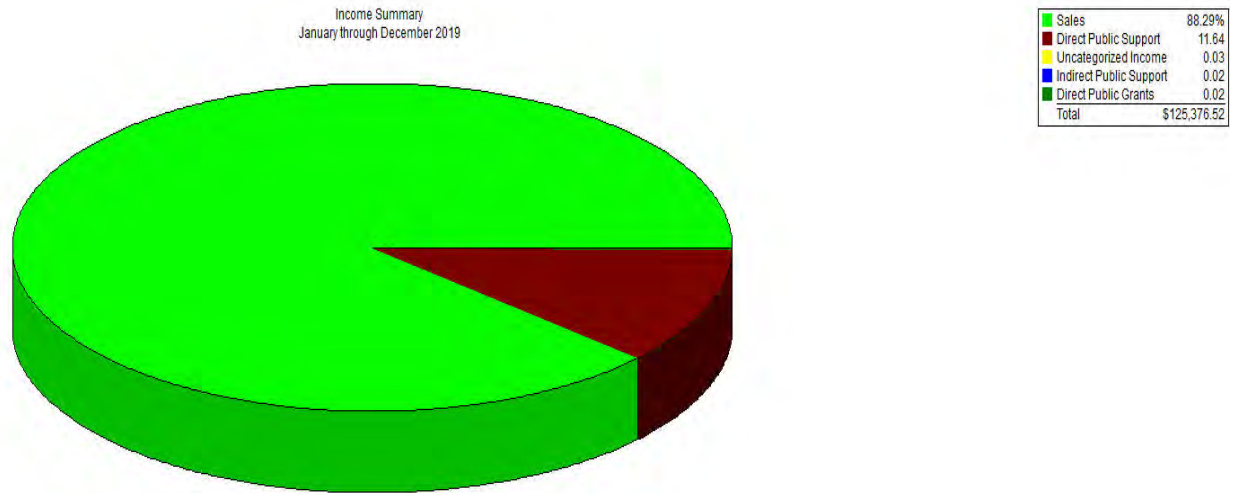


The first demo is scheduled to be launched in 2023, according to Col. Felt. He is hoping to put these systems around the planet, as long as the space solar cells are manufactured and prove capable of rigorous testing. This project is not only for the convenience of military access to electrical power anywhere they are deployed but Col. Felt envisions civilians being able to benefit as well.

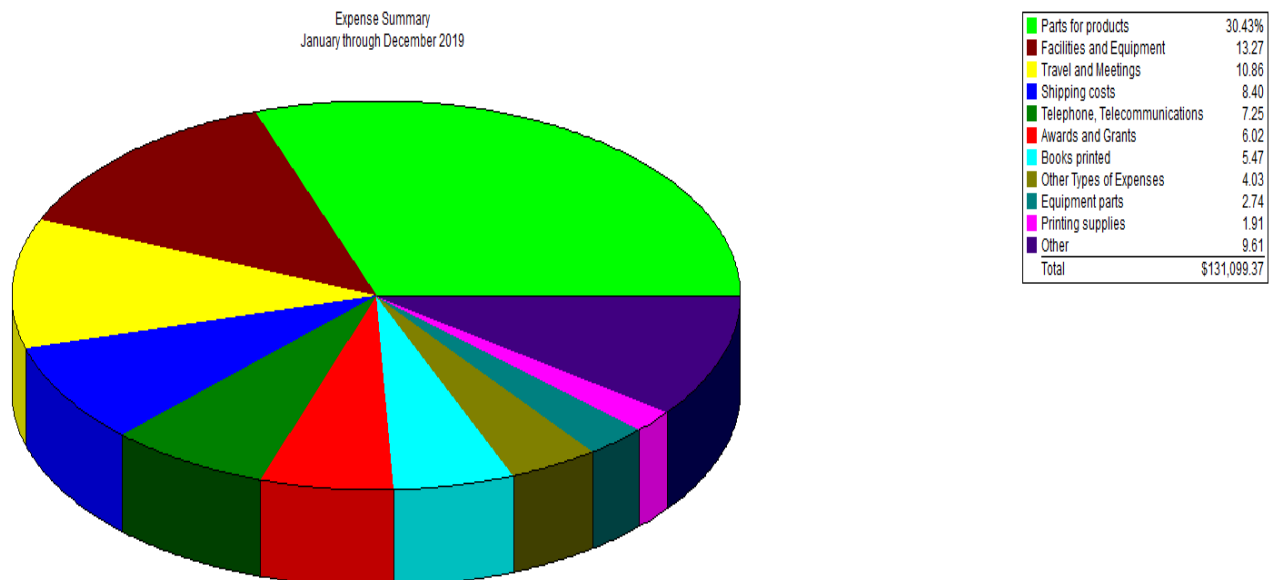


# IRI FINANCIAL REPORT 2020

Total Income: \$125,378.52



Total Expenses: \$131,090.37





Dr. Valone at the UFO Mega Conference 2020, Laughlin NV

## INTEGRITY RESEARCH INSTITUTE

5020 Sunnyside Ave, Suite 209, Beltsville MD 20705

Tel: 301-220-0440

email: [info@IntegrityResearchInstitute.org](mailto:info@IntegrityResearchInstitute.org)

[www.Integrity-Research.org](http://www.Integrity-Research.org)



AFRL

### Space Solar Power

COFE12 speaker  
Col. Eric Felt



The idea of power beamed from space is not new, but has not been historically feasible. However, recent technology developments have put this concept within the realm of the possible, such as:

- Mass-efficient deployable structures concepts
- Increased efficiency of modern electronics
- Reduced mass, high efficiency solar cells
- Promising low-cost manufacturing approaches in work
- Lower cost per kg to get to orbit
- Solar to RF Sandwich Module – a potentially game changing technology



Author: NASA

Despite many concepts of grand scale, nothing of significance has been built, but many different entities are working to prove the feasibility of this concept including Naval Research Laboratory (NRL) who recently launched their version of the sandwich module, the Photovoltaic RF Antenna Module (PRAM).